ROCKY FLATS CLOSURE LEGACY

FUTURE LAND USE, END STATE AND STEWARDSHIP

MOST OF THE FORMER ROCKY FLATS PLANT WILL BECOME THE ROCKY FLATS NATIONAL WILDLIFE REFUGE UNDER THE MANAGEMENT OF THE U.S. FISH AND WILDLIFE SERVICE. AN UNINTENDED CONSEQUENCE OF BEING A SECURE GOVERNMENT INSTALLATION WAS THAT THERE WAS NO FARMING, GRAZING OR DEVELOPMENT OF THE SITE'S SECURITY PERIMETER AREA (THE BUFFER ZONE), MAKING IT SUPERBLY SUITED FOR ITS NEW REFUGE MISSION.

FUTURE LAND USE, END STATE AND STEWARDSHIP

INTRODUCTION

An end state vision was developed in 1995 that provided a common focus for disparate groups interested in the cleanup of Rocky Flats. As the cleanup proceeded, however, the unresolved details of the end state vision emerged, and became increasingly important to the community dialogue as the project progressed. The principal components of the end state vision - future Site use, end state, and long-term stewardship - became increasingly relevant as accelerated closure became more likely. Initial discussions about future Site use predated the cleanup mission, and future use issues were not fully developed until June 2005 with the issuance of the Comprehensive Conservation Plan (CCP)[35] for the Rocky Flats National Wildlife Refuge. End state refers to the environmental conditions on Site at completion of the active cleanup. End state was somewhat predetermined by the nature and extent of contamination on Site, and by three key cleanup decisions: no long-term onsite storage or disposal of radioactive waste, no long-term storage of plutonium in a vault, and removal of all structures to at least three feet below grade. Stewardship, as it is understood in the DOE, was a concept and term that was integrated into the cleanup only recently. Although CERCLA requires consideration of long-term care when making remedial decisions, programmatic stewardship discussions evolved separate from the cleanup initiative. The Department of Energy addressed stewardship as an evolving new mission, with creation of the Office of Legacy Management, and Rocky Flats was the first major site to coordinate the transition of Site activities to Legacy Management. When the final land transfers take place to U.S. Fish & Wildlife Service, they will begin the stewardship role for the wildlife refuge as directed through legislation.

Provide for early involvement of stakeholders in cleanup decisions. This will lead to greater community acceptance of the cleanup, and better decisions by the DOE.

DISCUSSION

FUTURE SITE USE

The Early Future Use Debate

Community debate about future Site use pre-dated the formal declaration of Rocky Flats as an accelerated cleanup site, and in fact began over three decades ago. In 1974 Colorado Governor-elect Lamm and Congressman-elect Wirth responded to constituent concerns about Rocky Flats by creating a citizen's Rocky Flats Task Force. The final report dated October 1, 1975[150] included among its recommendations that the Governor and Congressman request Congress and the President to "…reassess the Rocky Flats Plant as a nuclear weapons component manufacturing facility…and decontaminating and converting the Plant's facilities to a

less hazardous energy-related industry…". The Energy Research and Development Administration (precursor to DOE) disagreed with the Task Force, however the political exchanges continued and in April 1979 the DOE agreed to undertake the requested study. The Long-Range Rocky Flats Utilization Study was published in February 1983[152] covering twelve major analysis areas, among them decommissioning and decontamination, and demolition. Regarding future use the Study concluded in part, "In terms of reuse potential, Rocky Flats is an extremely complex – single-purpose – facility, and it does not lend itself to many alternative uses."

In 1983 the high profile BRCC put Rocky Flats in the public spotlight with media coverage almost every day. Positions concerning Rocky Flats future use were established and alliances formed in the political and stakeholder community…

Although pleased that the DOE had consented to the study, Governor Lamm and Congressman Wirth appointed the Blue Ribbon Citizen's Committee (BRCC) with a grant from the Federal Emergency Management Agency to provide independent assessment of the thoroughness, completeness, and objectivity of the DOE analysis. One notable member of the committee was District 5 State Representative Frederico Pena, who was elected Mayor of Denver in 1983. He later served as Secretary of Energy from 1997 – 1998, making significant contributions to Rocky Flats closure described in the section *Congressional and Executive Administrative Support.* The BRCC followed the DOE work closely, with monthly committee meetings and over a dozen public meetings and workshops. The BRCC Final Report was released in December 1983[153] and while critical of some study elements, it generally supported the DOE future use conclusions. For the future use issue the greater contribution of the BRCC was raising the overall level of awareness regarding Rocky Flats throughout the Denver area. Prior to the BRCC the DOE activities at Rocky Flats were known mostly by a small group of politicians and activist groups. The high profile BRCC put Rocky Flats in the public spotlight with media coverage almost every day. Positions concerning Rocky Flats future use were established and alliances formed in the political and stakeholder community almost ten years before the DOE's Office of Environmental Management was formed.

Another study relevant to Rocky Flats future use was commissioned by Governor Romer in 1989. The Citizen Advisory Committee of the Colorado Environment 2000 Project issued their report in June 1990.[154] It had no specific recommendations regarding Rocky Flats, although the recommendations regarding water quality and hazardous waste would later impact the regulatory environment for the Rocky Flats closure. In hindsight the Colorado 2000 report likely contributed to the Rocky Flats closure in its discussion of emerging issues. The report made a strong statement about environmental ethics, listing key ingredients that included, "acting in the face of uncertainty, collaborating to solve problems, and setting priorities for action." These components appeared very clearly

three years later during the first dialogue with Colorado regarding a new regulatory agreement.

The raid of Rocky Flats by EPA and FBI agents in June 1989 focused a public spotlight on Rocky Flats that would remain bright for many years. Local governments and citizen groups had strong and disparate views about the future use of Rocky Flats; however, following the raid most stakeholders associated future use with cleanup levels. Formal discussions about future Site use designations commenced prior to the cleanup, but a specific use was not determined until midway through the cleanup project with the passing of the Rocky Flats Refuge legislation[155] in 2001. Even then, the details of Site access were not completed decided until the U.S. Fish & Wildlife Service's CCP was issued over three years later.

The approach to establishing future use can be best described as evolutionary. An advantage of this approach was that the cleanup was able to move forward even without complete resolution of these issues.

The approach to establishing future use can be best described as evolutionary. As interests were identified, and the cleanup proceeded, clarity of future use was achieved. An advantage of this approach was that the cleanup was able to move forward even without complete resolution of these issues. A disadvantage was that failure to identify and refine a future use early in the cleanup project, enabled citizen and local government land-use interests to permeate (and distract) discussions through the duration of the cleanup. These interests ranged from installing high fences to having no fences, and from allowing recreation to prohibiting access. These discussions were often highly charged, seldom had a technical or regulatory basis, and may have been reduced or avoided with a stronger focus on establishing future Site use up front.

However, establishing the end state was somewhat analogous to the accelerated action approach to cleanup whereby there was a bias for action.[36] The DOE accepted incomplete information regarding future use (as it did regarding final cleanup levels) in order to move forward with the cleanup, and with an informed opinion that all future use alternatives remained viable.

Developing a risk-based end state enabled greater community input in the cleanup, bounded the range of alternatives and provided a balance between characterization, risk, and public acceptance.

Rocky Flats Future Site Use Working Group (FSUWG)

The Rocky Flats Local Impacts Initiative (RFLII) was chartered as a community reuse organization early in June 1992 by the Secretary of Energy, following the elimination of the future weapons mission for Rocky Flats. RFLII sponsored the first formal discussion of future use, dating back to June 1994, two years prior to the signing of the Rocky Flats Cleanup Agreement.[3] The RFLII-sponsored Future Site Use Working Group (FSUWG) gathered dozens of members from a broad cross-section of stakeholders, and their 1995 report contained the consensus and non-consensus recommendations for future Site use. Beyond any specific

recommendation the FSUWG report[5] revealed the importance of future Site use to the community, the myriad associated political and technical issues, and the need for the DOE to address future Site use early in the cleanup process. The themes that were raised in this report – cleanup to background, purchasing of mineral rights, natural resources, technology development, limited personnel access to the Site – would provide an undercurrent for cleanup discussions for the next ten years.

By having the community interests revealed and written down, even though some recommendations were unrealistic, it provided for a certain level of accountability from the community, and a reference point for continuing community dialogue.

The FSUWG forum was also valuable in that it allowed the vetting of community interests early in the cleanup process. It bounded the range of alternatives, albeit a broad range, and thus facilitated moving forward with many cleanup decisions. By having the community interests revealed and written down, even though some recommendations were unrealistic, it provided for a certain level of accountability from the community, and a reference point for continuing community dialogue. The report also provided an early indication that some community members advocated cleanup to background levels regardless of future Site use, cleanup laws or human health risks associated with residual contamination. This would become important later in the process when the discussion moved from future use to end state, and the concept of the future user was introduced in the context of the cleanup laws and risk.

Despite the extensive FSUWG dialogue the future use issue was not ripe for resolution in 1995, and the Rocky Flats Field Office (RFFO) did not fully address future Site use issues until relatively late in the process. The DOE response to the FSUWG was reflected in the Rocky Flats Cleanup Agreement (RFCA), signed in June 1996, one year after the RFLII report was issued. This was a positive advancement of the future use discussion but did not resolve the issue, although the broad open space designation contained in the RFCA provided the agencies a sufficient conceptual framework to proceed with the cleanup.

Earlier involvement and increased stakeholder participation must be accompanied by accountability by stakeholders to the same regulatory and budgetary constraints placed upon the DOE.

Rocky Flats Cleanup Agreement (RFCA)

The RFCA was signed in July of 1996, one year after the FSUWG had issued their report, and made several important references to end state, without providing final resolution. Included in the RFCA preamble was the following language regarding future Site use:

"Cleanup decisions and activities are based on open space and limited industrial uses; the particular land use recommendations of the Future Site Use Working Group (FSUWG) are not precluded…"

Also, Attachment 5 to RFCA, RFETS Action Levels and Standards Framework for Surface Water, Ground Water, and Soils,[105] describes

future conceptual land uses including capped areas, an industrial use area, a restricted open space area, and unrestricted open space area. The concept that the predominant future Site use would be open space, with the possibility of some restricted reuse in some areas, was perpetuated, but without any specific land use designation achieved. Also, by including the land use scenarios in Attachment 5, a closer association of cleanup levels to future use was established by DOE and the regulatory agencies. This was important since some community members continued to maintain that future use and cleanup levels were two separate issues. That is to say, their goal for cleanup was to ensure maximum cleanup and the most restrictive future use, without any technical or regulatory correlation between the two.

Unfortunately, the RFCA discussion of future use was as non-resolute as its treatment of cleanup levels. While the issuance of RFCA served to bound the future use debate, the broad descriptions of land use were open to interpretation. The RFCA open space designation supported myriad land uses from golf courses to public parks to ecological research. Early in the project, this broad description of future use did not hinder cleanup. The priority risk reduction activities, draining actinide solutions from pipes and tanks and shipping materials to other DOE sites, were not impacted by this uncertainty in future site use. But the very mechanism that enabled cleanup to proceed under the accelerated action framework also left end state and future use unresolved. As cleanup progressed from materials stabilization to decommissioning and environmental restoration, it became increasingly important that a more concise future Site use be defined, to ensure that the cleanup would support that use.

National Conversion Pilot Project

The RFLII organization played a key role in sponsoring the FSUWG, but they also were involved in sponsoring the National Conversion Pilot Project (NCPP). The NCPP, announced by the DOE in December 1993, was to be the nation's first economic conversion project at a Department of Energy facility. The pilot project at Rocky Flats would clean and transition certain industrial buildings for use by a private, industrial manufacturer to recycle contaminated scrap metals. The RFFO funded the first two stages and engaged the regulatory agencies to develop the regulatory framework under which the manufacturer would operate. After more than two years of effort, the regulatory and liability issues were insurmountable and the NCPP was terminated before stage 3, which was to prove the economic viability. Although this pilot effort failed to advance to a viable enterprise it signaled a marked change in the dialogue regarding reuse of the industrial area. On the heels of the unsuccessful NCPP, RFLII chartered another working group in July 1997, the Industrial

After the regulatory and liability issues became insurmountable, the failure of the National Conversion Pilot Project all but eliminated any viable reuse of the industrial area of the site for re-industrialization purposes.

Area Transition Task Force, to explore other options for reuse of the industrial area. Their final report was issued in September 1998[156] and all but eliminated any viable reuse of the industrial area of the Site, rather focusing to possible industrial reuse along the western boundary of the Site. The RFLII itself was succeeded on April 1, 1999 by the Rocky Flats Coalition of Local Governments (RFCLOG, described in the section *Stakeholder Involvement)* providing for a broader perspective on issues of cleanup, closure, and stewardship issues.

Colorado Natural Heritage Program and Rock Creek Reserve

The FSUWG report in 1995 had identified open space use, broadly defined, for most of the Site with some possible industrial area reuse. After several years of study and the unsuccessful NCPP it was becoming clear to everyone that industrial reuse was unlikely. During the same time period following the FSUWG report, DOE advanced several studies to better understand the buffer zone and attempt to narrow the broad open space definition. One very significant study was the 1996 Phase II Report on the buffer zone prepared by the Colorado Natural Heritage Program (CNHP), a research entity of the Nature Conservancy housed at Colorado State University.[157] This report identified the conservation significance as very high, owing mainly to "…the largest example of a xeric tallgrass prairie remaining in Colorado, and perhaps in North America." It was identified with CNHP's highest priority for protection.

Although the Rock Creek Reserve designation was an important step for buffer zone preservation, it also marked an important step to further define the nature of the open space use for the buffer zone.

Somewhat in response to the awareness raised by the CNHP study, RFFO began development of a Natural Resource Management Policy (NRMP) to guide management of the buffer zone while cleanup activities were progressing under RFCA. The NRMP was intended to be generally consistent with the RFCA Vision as well as the FSUWG report in guiding buffer zone management. As a significant policy document it was released for public comment. Public comment focused heavily on preservation of the ecosystems, and acquisition of mineral rights to facilitate that protection. The final NRMP was released in September 1998[158] and identified the public concerns as emerging issues. In response to comments the DOE stated it "…would support and participate in a process…" to resolve the conflict between the mineral rights (quarrying) and tallgrass prairie protection. A major step to advance the issue was creation of the Rock Creek Reserve by the Secretary of Energy in May 1999. This designation of 800 acres of Rocky Flats buffer zone, uncontaminated and unaffected by Site activities for 40 years, was heralded by the Governor, local governments, the U.S. Fish & Wildlife Service, and most stakeholders. Although the Rock Creek Reserve designation was an important step for buffer zone preservation, it also

marked an important step to further define the nature of the open space use for the buffer zone.

Rocky Flats National Wildlife Refuge Act

The Rocky Flats cleanup and closure had received strong bipartisan support since its inception. Senator Allard and Congressman Udall, who had been following the cleanup closely, recognized the impasse created by the uncertainty of future land use. While the broad parameters had been established (although limited industrial reuse had been effectively eliminated through the public dialogue among all parties) a final designation was necessary to achieve the clarity of an endpoint and transition to a future mission. Building on the strong public support and approval for the Rock Creek Reserve, legislation was introduced in 2000, ultimately enacted into law in 2001,[155] designating Rocky Flats as a national wildlife refuge to be managed by the U.S. Fish and Wildlife Service (USFWS). This legislation provided for a specific land use consistent with the RFCA, compatible with adjacent county and city lands being managed as open space, and supported by a broad consensus of local stakeholders.

Future use discussions evolved somewhat analogous to and in parallel with the evolution of the cleanup. Vision and broad consensus was achieved first, then built upon with continuing dialog and information, taking limited action as allowable

The legislation provided a more specific end point for the project. Discussions regarding Site access and uses within the refuge framework were led by the USFWS, who had an operating assumption that the cleanup would support a refuge. The future user (refuge visitor) and future Site worker (USFWS refuge worker), were no longer hypothetical. This enabled the DOE and K-H to demonstrate through characterization, monitoring and modeling, that the cleanup would far exceed the standards necessary for the Site to support refuge uses.

The discussion in the paragraphs above shows that future use discussions evolved somewhat analogous to and in parallel with the evolution of the cleanup. Vision and broad consensus was achieved first, then built upon with continuing dialog and information, taking limited action as allowable. As additional information was developed, progress was made until, ultimately, final decisions were achieved.

END STATE

End state refers to Site physical conditions upon completion of the cleanup mission, and regardless of the future use. This is an important distinction that often is confused by stakeholders. Although future use can influence end state, end state may be different than future use, and for Rocky Flats was bounded by the RFCA, which described the framework for soil and

water cleanup. But within both the contractual and regulatory framework, there was considerable flexibility to incorporate community interests.

Because of the nature and extent of contamination at the Site and evolution of the cleanup project plans, the physical conditions at closure could be fairly accurately forecasted. By 1997, a most likely end state was taking shape, including two landfill covers, three groundwater treatment systems, and groundwater and surface water monitoring stations. The specific number of monitoring wells, final surface soil cleanup levels, and the possibility of an additional groundwater treatment system were open issues, but the range of outcomes for these issues would be relatively insignificant with respect to footprint, post-closure surveillance and monitoring, or human health risk. Being able to quantify these conditions early in the cleanup process was extremely useful during discussions of surface and subsurface soil cleanup levels. In fact, the DOE may have benefited from placing even greater emphasis on the end state footprint earlier in the process to set the context of cleanup decisions and communicate the bounded end state conditions.

Being able to quantify the physical conditions at closure early in the cleanup process was extremely useful during discussions of surface and subsurface soil cleanup levels.

In what may be an early lesson learned from Rocky Flats, DOE Headquarters developed an approach to align Site end state, and thereby the cleanup plans and baselines, with expected future use. The policy required engagement of regulators and stakeholders through all phases of the Risk-Based End State (RBES) process, as it was termed. The approach was communicated in DOE Policy 455.1, dated 7/15/03, with schedules for completion at each EM site directed by EM-1 memo in 2004. For the Rocky Flats stakeholders and regulators this new requirement caused more confusion than clarity. By 2004 the cleanup and end state were almost completely fixed by RFCA, the closure contract, the Refuge Act, and the completion of actual cleanup work. The Rocky Flats DOE staff completed an RBES document[202] as required by the guidance, but it essentially was a historical recap of the various stakeholder and regulatory processes and decisions to that point. Stakeholders and regulators viewed the exercise as unnecessary and did not engage, but also offered no objection.

STEWARDSHIP

Stewardship worked its way into the vernacular of RFFO and the Rocky Flats stakeholder community only after the Site was more than half way to achieving accelerated cleanup and closure of Rocky Flats. The stewardship initiative provided a forum for discussing the strategy for post-closure care that had previously been discussed only tactically (for individual cleanup actions). Through the late 1990's post-closure care

requirements were factored into decision-making, but the details of implementation had not been addressed collectively.

The stewardship initiative provided a forum for discussing the strategy for post-closure care that had previously been discussed only for individual cleanup actions, allowing them to be addressed collectively.

Stewardship Working Group

Throughout the cleanup, individual removal actions had stewardship components that were identified, but the details of implementation, such as resources, reporting, responsibility and accountability were not documented as part of an integrated stewardship plan. The RFCA parties understood that these stewardship requirements would be addressed through the comprehensive Site Record of Decision upon completion of the accelerated actions. But as a 2006 closure started to look achievable, stakeholders became more interested in defining the details, and less willing to wait for the CERCLA process to unfold. They were ready for an integrated plan. Also, there was a real anxiety among some stakeholders that the DOE intended to simply abandon the Site once the cleanup was complete. During 1998, and in response to these sentiments, the Rocky Flats Site Manager requested that the Citizens Advisory Board and the Rocky Flats Council of Local Governments co-chair a public forum to discuss Site stewardship issues. As a result the Stewardship Working Group was formed, and became the focal point for Rocky Flats stewardship discussions.

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The stewardship dialogue served as a relief valve for stakeholder issues that had been building up during the course of the cleanup. The meetings were lively and well attended, and focusing the dialogue with the Stewardship Working Group had an immediate positive result. In response to a community recommendation, the Site modified the Environmental Restoration RFCA Standard Operating Protocol (ER RSOP)[24] to include an explicit evaluation of stewardship implications (this was already being done through implementation of CERCLA, but the accelerated action model did not afford much community dialogue). Incorporation of the stewardship flow chart into the ER RSOP enhanced stakeholder trust and served to enhance the stewardship dialogue. It also served to alleviate some suspicions that there was no substance behind the stewardship initiative. Another subtlety of having the Stewardship Working Group was that subsequent cleanup decisions were viewed with less concern since there was now a legitimate forum and process for accounting for stewardship issues that might manifest themselves post-closure.

Office of Legacy Management

Local stakeholder groups surrounding Rocky Flats weren't the only people looking ahead to completion of the closure project. "A Review of the

Environmental Management Program" report (the Top-to-Bottom Review as it was known) delivered February 2002[159] included among its recommendations a narrowing and focusing of the EM Program scope to accelerated, risk-based, cleanup and closure. It made the specific recommendation, "EM should redeploy, streamline, or cease activities not appropriate for accelerated cleanup and closure." The long-term stewardship activities that naturally follow site closure were some of the tasks considered outside the new, focused EM scope. The report recommendations prompted internal DOE reactions and discussions regarding the appropriate organization to manage long-term stewardship. By February 2003 these discussions had evolved sufficiently for DOE to announce formation of the Office of Legacy Management (LM) to be the office with the primary responsibility for sites that have been closed.[160] In April 2003 Mike Owen, Director of the DOE Office of Worker Transition and designee to standup the new LM, testified to Congress[161] regarding the specific mission of LM, particularly highlighting the anticipated closure of Rocky Flats, as well as the Mound and Fernald sites in Ohio, and the nature of the stewardship functions.

With the LM organization destined to take over Rocky Flats operations after closure, the RFFO began discussions in summer 2003 regarding the future transition. The discussions were productive, but difficult, owing largely to uncertainties related to the closure completion schedule and the evolving mission, tasks, and organization of the new LM office. Complicating the transition discussion was a parallel effort with EM to create a Consolidated Business Center to provide administrative support to small and closing sites. Much of the early dialogue about transition was very unclear regarding which organization might ultimately take responsibility and when, but it was very useful to define the comprehensive list of tasks and issues to be considered. In fact, this was a significant lesson learned, to start the transition process as early as possible to define the scope of the effort. We jointly discovered hundreds of unexpected tasks and subtasks through the early and deliberate transition process.

...it was very useful to define the comprehensive list of transition tasks and issues to be considered. In fact, this was a significant lesson learned, to start the transition process as early as possible to define the scope of the effort.

The Rocky Flats transition planning effort with LM served as both a model and trial effort. Guidance jointly signed by EM and LM in June 2004 was both modeled after and built upon the Rocky Flats transition effort to date. Further guidance with specific Site Transition Plan requirements was provided in February 2005. By this time the transition planning effort was very mature, several small tasks already having been transferred to LM. Rocky Flats submitted their Site Transition Plan (STP) in March 2005[162] according to the directed format, receiving approval of the STP later that month.

An approach for transition that was very successful was the bias toward early transition of tasks to LM, even if EM retained the funding or overall responsibility. These early task transfers allowed LM to gain experience while EM staff were still available as a resource. It also removed the time pressure that would have occurred if all the tasks had been transferred at contract completion. Meeting weekly, sometimes daily, also helped keep communications and issue resolution on track. LM's choice to hire several former RFFO staff members greatly smoothed the transition for both EM and LM. Currently the majority of tasks have been successfully transitioned, with the remainder expected at the beginning of fiscal year 2007. At that time LM will also assume budgeting and funding responsibility for the Site. The interface between LM and EM has continued to be productive and cooperative on a daily basis.

The RFCA parties advocated a bottoms-up approach to stewardship, starting with the regulatory requirements for post-closure operations, maintenance, surveillance and monitoring, and developing the reporting and meeting requirements from that basis

One of several key LM tasks would be assumption of the stakeholder dialogue. The focused Stewardship Working Group dialogue revealed a disparity in expectations between the stakeholders (in general) and the RFCA parties regarding the extent of the stakeholder communication infrastructure that would be necessary or required at Rocky Flats once the period of active remediation was complete. During the cleanup, there was a high level of stakeholder interaction, including correspondence, technical meetings, document reviews, Site tours and public meetings. It became apparent early on that some stakeholders expected many of the same stakeholder activities to continue after the cleanup was completed. This top-down approach did not fully consider the need for public involvement, and was very different than what the DOE envisioned. The RFCA parties advocated a bottoms-up approach to stewardship, starting with the regulatory requirements for post-closure operations, maintenance, surveillance and monitoring, and developing the reporting and meeting requirements from that basis. More specific discussion of the evolution of this topic is in the *Stakeholder Involvement* section.

Mineral Rights

Mineral rights have always been at issue an Rocky Flats owing in large part to mining being one of the major industries in Colorado for well over 100 years. Mineral rights were addressed briefly in the short (20 page) Environmental Impact Statement prepared in April 1972 to acquire the buffer zone.[163] They have been mentioned in every public review of Rocky Flats future use since that time (references listed earlier in this section). When the Rocky Flats Wildlife Refuge Act was passed in 2001 it directed the Department of Interior (DOI) and DOE to draft within 12 months and finalize within 18 months a memorandum of understanding (MOU) in part to resolve the issues surrounding mineral rights. This became a difficult task. A working draft MOU was prepared within

several months, but the mineral rights issue prevented signing the draft MOU for more than three years. The issues were (1) DOE insistence that the Refuge Act obliged DOI to take the lands and that the DOE was not funded nor authorized to purchase the mineral rights, and (2) DOI's insistence that receiving lands with the potential for active quarry operations was against their policy and inconsistent with management of the refuge.

At issue was DOE insistence that the Refuge Act obliged DOI to take the lands, and DOI's insistence that receiving lands with the potential for active quarry operations was against their policy and inconsistent with management of the refuge.

As time passed the Congressional sponsors of the Refuge Act became distressed that the MOU was not final and the mineral rights issue remained at an impasse between the Federal agencies. However, by 2005 it was becoming clear that the closure project would finish ahead of schedule and hundreds of millions under the target and budget cost. This presented an opportunity for a resolution to the mineral rights question, to fund acquisition of the mineral rights from the project "savings". Senator Allard began work with the RFFO in January 2005 to develop legislation that would enable a mineral rights action to satisfy DOI, DOE, and any other stakeholders. A substantial amount of information was provided including the historical stakeholder comments on the topic, private landowner interests, the active quarry status, the impact on local gravel costs for construction, natural resource damages, and other related topics. The RFCLOG debated the issue at several meetings and prepared correspondence encouraging resolution of the issue.[164] Key to finalizing the legislative language was DOE agreement with DOI regarding the transfer of mineral rights parcels. In March 2005 agreement was reached and the draft MOU was published in the Federal Register[165] based on the DOE maintaining control of any land parcels with active quarry operations or with sand and gravel mineral rights which could be permitted in the future. DOI would accept transfer once DOE owned the mineral rights, or once the active quarrying was completed and the land had been reclaimed. The process of exactly how DOE would acquire the mineral rights still required work before the parties could agree to a Final MOU. The parties expected the Final MOU to be completed within six months.

In parallel with the MOU issue, the question of natural resource damages as described under CERCLA Section 107 was starting to gain more attention. Natural resource consultation with USFWS had existed at Rocky Flats since 1992 under terms of a Natural Resource Trustees MOU. The individual remediation activities were also developed to mitigate natural resource damages, such that natural resource damages were expected to be very small. However, the law allows for lawsuits to pursue any natural resource damage claims, making the litigation alone a significant cost. The DOE Inspector General also was completing an investigation regarding the status of planning and analysis regarding natural resource damages. The RFFO maintained communication with

interested Congressional representatives regarding the natural resource damages concerns, the mineral rights resolution, and the MOU with DOI. Senator Allard's legislation continued to be developed to address multiple needs, finally being proposed, worked through Congress, and ultimately signed in January 2006.[167]

The 2005 DOD Authorization Act authorized $10 million for DOE to acquire the essential mineral rights required for the Rocky Flats Wildlife Refuge identified by the USFWS and DOE. The rights are to be purchased at fair market value from willing sellers. Purchase of the rights satisfies any natural resources damages liability claim against DOE. If DOE is unable to purchase portions of these mineral rights, the Rocky Flats Natural Resources Trustees are to receive a payment equal to the value of those rights, as well as any portion of the $10 million not used to acquire mineral rights. A companion bill appropriated the $10 million. The Defense Authorization Act of 2005 obviated efforts that were underway to prepare a Final MOU between DOE and DOI, as it directed the mineral rights resolution, which would allow the land transfer to establish the wildlife refuge to the satisfaction of both agencies.

The 2005 DOD Authorization Act authorized $10 million for DOE to acquire the essential mineral rights required for the Rocky Flats Wildlife Refuge identified by the USFWS and DOE.

With the resolution path established by legislation the DOE began in earnest to acquire the mineral rights. Consultation with USFWS and DOI proved very useful as they had significant experience with land and real property transfers of this nature. They suggested a third-party negotiator, separate from any Federal entity, to conduct the negotiation and then transfer the parcels to the DOE as a second step. The Trust for Public Lands (TPL), a non-profit organization, was contacted based on their experience with such transactions in the Colorado area. Their negotiation with the private mineral rights holders is underway, and in parallel a valuation of the mineral rights to support the ultimate real property transfer is also being completed.

KEY LEARNING POINTS

1. Public discussion of future site use provides a powerful tool to build consensus and better clarify areas of particular public interest. Although not always discussed in public forums, local and state governments have strong beliefs on future use that extend beyond the typical DOE planning horizon.

2. Inclusion of consensus future use decisions into regulatory agreements provides for stronger buy-in by the public and the regulators, and can help maintain an outcome-based focus.

3. Using a risk-based end state model can facilitate greater community input in the cleanup, although the dialogue will likely be difficult and controversial. Bound the range of end state alternatives, balancing characterization, risk, and public acceptance.

4. Define physical and administrative end state conditions early in the cleanup project. This provides for a broader context when individual near-term decisions become complicated or controversial and serves as a DOE commitment to an endpoint.

5. Maintain open communications with elected officials on future use and end state issues. Elected officials may be very willing to propose and champion legislation that can assist resolution of issues and gain support from their constituents.

6. Develop a Stewardship program early in the project to provide visibility and commitment to the community regarding DOE's long-term obligation for surveillance, maintenance, monitoring and remedy assurance.

7. Begin transition coordination with Legacy Management as early in the process as feasible. Build strong communications links and develop a bias for staged, early transition of activities to LM.

8. Initiate the termination, transfer, and transition of regulatory permits and agreements well before closure. These activities are time-consuming tasks involving substantial negotiations, meetings, and document reviews, and may have a substantial learning curve for LM. This effort would have been a little smoother and less stressful at Rocky Flats if it had been initiated earlier.[169]

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